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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/804,427	03/18/2004	Terrance John Hermary	58255-010301	7221

45934 7590 06/01/2006

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EXAMINER
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DETSCHEL, MARISSA

ART UNIT	PAPER NUMBER
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2877

DATE MAILED: 06/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

H.A

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/804,427	HERMARY ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Marissa J. Detschel	2877	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on March 18, 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-28 are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Election/Restrictions***

This application contains claims directed to the following patentably distinct species:

- a. A scan head with two spaced light projectors and two spaced light detectors, wherein the projectors operate in a time-division multiplexed mode, as disclosed in paragraphs 56 and 70 of the specification.
- b. An array of spaced scan heads each with two spaced light projectors and two spaced light detectors, wherein the scan heads operate in a time sequence selected to avoid interference between neighboring heads, as disclosed in the specification in paragraph 57.
- c. A scanning apparatus using scan heads light detectors and a projectors arranged for near-field and far-field views, wherein the detectors bracket the projectors, and one of the projectors projects a fan of light onto the object, said light projecting a coded light comprised of a pattern of symbols with specific duty cycles utilizing processing involving triangulation computation and said duty-cycle values, as disclosed in paragraphs 48, 50-55, 58-62 of the specification.
- d. A method for processing reflection data obtained from scanning an object with a coded light pattern comprising a selection and processing of data within ranges set by the scanning layout and/or the angles of projection, as disclosed in paragraph 63 of the specification.

The following sets of claims are suggested by the Examiner as reading upon each of the species:

- a. Claims 1-2
- b. Claims 3-4
- c. Claims 5-23 and 25-28
- d. Claim 24

The species are independent or distinct because they require four distinct setups and operations of a scanning apparatus utilizing scan heads.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which depend from or otherwise require all the limitations of an allowable generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species.

MPEP § 809.02(a).

Furthermore, upon the election of Species c., the following restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 5-6 and 8-9, drawn to a scan head with two spaced detectors and two spaced projectors, wherein the detectors bracket the projectors and one of the projectors projects a fan of light onto the object, classified in class 356, subclass 237.1.
- II. Claims 7, 10-23, and 25-28, drawn to a scanning apparatus with a scan head utilizing two detectors and two projectors that project coded light of symbols with specific duty cycles, utilizing a near field and a far field view and undergoing processing with triangulation computation and said duty-cycle values, classified in class 356, subclass 237.1.

Inventions I and II are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed as evidenced by the particulars of the subcombination. The detectors do not need to bracket the projectors and the projectors do not need to emit a fan of light for scanning in this particular apparatus. The subcombination has separate utility such as in a device for pattern recognition.

Upon restriction of invention II, and further examination of Invention II, if claim 10 is rejected, then claims 5-6 and 8-9 will be rejoined for examination purposes. Upon the

rejection of claim 10, claims 11, 12, and 14, which depend from claim 10, will need to be examined. The limitations of claims 11, 12, and 14 are similar to the limitations found in claims 5, 7, and 8, and, thus, claims 5-6 and 8-9 will be rejoined.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

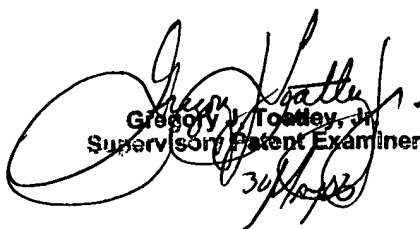
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marissa J. Detschel whose telephone number is 571-272-2716. The examiner can normally be reached on M-F 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory J. Toatley, Jr. can be reached on 571-272-2059. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2877

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Marissa J Detschel  
May 25, 2006  
MJD

  
Gregory J. Tordella, Jr.  
Supervisory Patent Examiner  
3/6/2006